Index to Volume 80 of The Bryologist[1, 2]

Acarospora chlorophana, 470-; fuscata, 470-; schleicheri, 470-; smaragdula, 470-; strigata, 470-
Achrophyllum dentatum, 169
Acrocladium extenuatum, 304-, 307*, 309*, 311*
Acrolejeunea, 606-; emergens, 606-
Adelanthus occlusus, 169
Aerobryopsis longissima, 203-
AHMADJIAN, V. *See* ROSENTRETER, R. & V. AHMADJIAN
Alberta, lichens on Populus tremuloides, 48
Alectoria crinalis, 529-; fremontii, 52; fuscescens, 52; implexa, 52; lanestris, 52; sarmentosa, 529-
Alectoronic acid, 350, 536-
Aloina aloides, 170-
Alpine, nitrogen-fixing lichen roles in New Mexico, 561
Amblystegium juratzkanum, 194, 630-; serpens, 169, 194, 546, 652; varium, 194, 546, 630-, 652
Amino acids, in Stictaceae, 354
Amphidium cyathicarpum, 183; lapponicum, 652; mougeotii, 233-
Amphoridium peckii, *243*
Anacamptodon splachnoides, 163, 652
Anaptychia diadenudata, 363; diadenudata fo. brachyloba, 363
Anastrophyllum assimile, 463; bidens, 154; helleranum, 480-; michauxii, 463, 482; minutum, 463, 482, 539-; saxicola, 463
Andreaea, 233-; acutifolia, 168; nitida, 168; rupestris, 168, 329, 651
Andrews, 1976 Bryological Foray, 651
ANDRUS, R. E. & D. H. VITT. Sphagnotheca Boreali-americana: Fascicle II, 645
Aneura, 169; pinguis, 272, 467, 489, 539-, 642
Anoectangium aestivum, 241, 242*; anomalum, 233-; apiculatum, *243*; arizonicum, *259*; breutelianum, 265; caldium, *243*; compactum, *243*; condensatum, *243*; dichroum, 233-; euchloron, *243*; excelsum, *247*; glaucescens, *247*; gradatum, *243*; handelii, *248*; incrassatum, *243*; incurvans, *248*; jamaicense, *243*; lechlerianum, *247*; liebmannii, *243*; liebmannii var. viride, *247*; obtusifolium, *248*; peckii, *243*; peruvianum, *247*; rubrigemmium, 330; sendtnerianum, *247*; sendtnerianum var. tenuinerve, *248*; stracheyanum, 233-; tenellum, *243*; tenuinerve, *247*; thomsonii, 233-
Anomobryum subnitidulum, 206
Anomodon attenuatus, 194, 546, 612-, 652; minor, 194, 546; rostratus, 546, 652; rugelii, 652
Anthelia julacea, 332-, 466; juratzkana, 466, 539-; micro-biocoenosis in, 332
Antheridia, development and maturation in Polytrichum, 143
Antherozoid, dispersal in Dawsonia superba, 439
Anthoceros crispulus, 644; laevis, 644; punctatus, 644
Anthocerotae, of Nebraska, 640
Anthocerotophyta div. nov., 407
Anthracothecium goniostomum, 363
Anzia americana, 136-; colpodes, 136-; ornata, 136
Anziaic acid, 201-
Apocryphaea, 522; concavifolia, 522-; javanica, 522-; julacea, 522-; julacea var. costaricensis, *523*; latifolia, *523*; latifolia var. microspora, *523*; paraguensis, *523*; plicatula, *523*; robusta, *523*; squarrulosa, 522-; subintegra var. idanreensis, *524*; subrobusta, *524*; tisserantii, *524*
Aptychella robusta, 330
Archilejeunea, 606-
Argentina, lichens from Buenos Aires Province, 363
Arnellia fennica, 466
Arthonia patellulata, 52; trilocularis, 342
Arthopyrenia cavata, 32-
ARWOOD, D. A. *See* CULBERSON, C. F., W. L. CULBERSON & D. A. ARWOOD
Ascomycetes, lichenized, 100
Associations, saxicolous bryophyte and macrolichen, 612
Asterella, 340-; gracilis, *274*; lindenbergiana,

[1] Compiled by Guy R. Brassard, Department of Biology, Memorial University, St. John's, Newfoundland, Canada A1B 3X9.

[2] New scientific names are printed in **boldface** type; illustrations are indicated by an asterisk; synonyms by *italicized* page numbers; minor entries by a hyphen following the initial article page.

Index to Volume 80 of The Bryologist[1, 2]

Acarospora chlorophana, 470-; fuscata, 470-; schleicheri, 470-; smaragdula, 470-; strigata, 470-
Achrophyllum dentatum, 169
Acrocladium extenuatum, 304-, 307*, 309*, 311*
Acrolejeunea, 606-; emergens, 606-
Adelanthus occlusus, 169
Aerobryopsis longissima, 203-
AHMADJIAN, V. *See* ROSENTRETER, R. & V. AHMADJIAN
Alberta, lichens on Populus tremuloides, 48
Alectoria crinalis, 529-; fremontii, 52; fuscescens, 52; implexa, 52; lanestris, 52; sarmentosa, 529-
Alectoronic acid, 350, 536-
Aloina aloides, 170-
Alpine, nitrogen-fixing lichen roles in New Mexico, 561
Amblystegium juratzkanum, 194, 630-; serpens, 169, 194, 546, 652; varium, 194, 546, 630-, 652
Amino acids, in Stictaceae, 354
Amphidium cyathicarpum, 183; lapponicum, 652; mougeotii, 233-
Amphoridium peckii, *243*
Anacamptodon splachnoides, 163, 652
Anaptychia diadenudata, 363; diadenudata fo. brachyloba, 363
Anastrophyllum assimile, 463; bidens, 154; helleranum, 480-; michauxii, 463, 482; minutum, 463, 482, 539-; saxicola, 463
Andreaea, 233-; acutifolia, 168; nitida, 168; rupestris, 168, 329, 651
Andrews, 1976 Bryological Foray, 651
ANDRUS, R. E. & D. H. VITT. Sphagnotheca Boreali-americana: Fascicle II, 645
Aneura, 169; pinguis, 272, 467, 489, 539-, 642
Anoectangium aestivum, 241, 242*; anomalum, 233-; apiculatum, *243*; arizonicum, *259*; breutelianum, 265; caldium, *243*; compactum, *243*; condensatum, *243*; dichroum, 233-; euchloron, *243*; excelsum, *247*; glaucescens, *247*; gradatum, *243*; handelii, *248*; incrassatum, *243*; incurvans, *248*; jamaicense, *243*; lechlerianum, *247*; liebmannii, *243*; liebmannii var. viride, *247*; obtusifolium, *248*; peckii, *243*; peruvianum, *247*; rubrigemmium, 330; sendtnerianum, *247*; sendtnerianum var. tenuinerve, *248*; stracheyanum, 233-; tenellum, *243*; tenuinerve, *247*; thomsonii, 233-
Anomobryum subnitidulum, 206
Anomodon attenuatus, 194, 546, 612-, 652; minor, 194, 546; rostratus, 546, 652; rugelii, 652
Anthelia julacea, 332-, 466; juratzkana, 466, 539-; micro-biocoenosis in, 332
Antheridia, development and maturation in Polytrichum, 143
Antherozoid, dispersal in Dawsonia superba, 439
Anthoceros crispulus, 644; laevis, 644; punctatus, 644
Anthocerotae, of Nebraska, 640
Anthocerotophyta div. nov., 407
Anthracothecium goniostomum, 363
Anzia americana, 136-; colpodes, 136-; ornata, 136
Anziaic acid, 201-
Apocryphaea, 522; concavifolia, 522-; javanica, 522-; julacea, 522-; julacea var. costaricensis, *523*; latifolia, *523*; latifolia var. microspora, *523*; paraguensis, *523*; plicatula, *523*; robusta, *523*; squarrulosa, 522-; subintegra var. idanreensis, *524*; subrobusta, *524*; tisserantii, *524*
Aptychella robusta, 330
Archilejeunea, 606-
Argentina, lichens from Buenos Aires Province, 363
Arnellia fennica, 466
Arthonia patellulata, 52; trilocularis, 342
Arthopyrenia cavata, 32-
ARWOOD, D. A. *See* CULBERSON, C. F., W. L. CULBERSON & D. A. ARWOOD
Ascomycetes, lichenized, 100
Associations, saxicolous bryophyte and macrolichen, 612
Asterella, 340-; gracilis, *274*; lindenbergiana,

[1] Compiled by Guy R. Brassard, Department of Biology, Memorial University, St. John's, Newfoundland, Canada A1B 3X9.

[2] New scientific names are printed in **boldface** type; illustrations are indicated by an asterisk; synonyms by *italicized* page numbers; minor entries by a hyphen following the initial article page.

274, 489; ludwigii, 274, 489, 642; saccata, 274, 467, 489
Astomiopsis, new species of, 359; amblyocalyx, 359-; **pacifica** sp. nov., 359, 360*; sinensis, 359-; subulata, 359-
Athalamia hyalina, 467
Atranorin, 201-, 348, 350, 536-; concentration of in lichens, 171
Atrichum, 619-; angustatum, 194, 571-, 575*, 576*, 577*, 578*, 580*, 612-, 630-, 653; angustatum, spatial patterns and gamete dispersal distances in, 284, 286*, 288*; crispum, 194, 653; oerstedianum, 194, 653; pallidum, 206; undulatum, 154, 194
Aulacomnium androgynum, 284-; palustre, 194, 630-, 634*, 652
Australia, bryophytes of Macquarie Island, 167
Autecology, of bryophytes in sandstone canyons of southern Illinois, 571
Authors, of names of bryophytes, 502
AWASTHI, D. D. & K. P. SINGH. Heppsora, a new lichen genus from India, 536

Bacidia acclinis, 53; akompsa, 53; aphiaca, 342; bagliettoana, 53; chlorococca, 53; fuscatula, 342; obscurata, 53; rhaphidophylli, 342; sphaeroides, 53
Baeomycesic acid, 100-
Barbilophozia **cavifolia** comb. nov., 410; **hyperborea** comb. nov., 410: quadriloba var. **collenchymatica** comb. nov., 410; quadriloba var. **glareosa** comb. nov., 410
Barbula, 76-, 175-; acuta, 546; boliviana, 76-; cancellata, 353; convoluta, 194, 652; cruegeri, 233-; curvirostris, 253; curvirostris fo. scabra, 253; denticulata, *544*; fallax, 351, 546; fuscula, *159*; lurida, 233-; **microstoma** comb. nov., 544; **recurva** comb. nov., 544; unguiculata, 194, 546, 630-; **vardei** nom. nov., 544
BARNES, C. R., 560*
BARSTOW, J. M. & F. H. ERBISCH. Effects of acute gamma radiation and winter temperature-light conditions on photosynthesis of Cladonia mitis, 83
BARTRAM, E. B., 560*
Bartramia halleriana, 206; humilis, 183; papillata, 169; pomiformis, 206, 652; thelioides, 183
Bazzania, 480-; angustifolia, 154; fauriana, 154; mayebarae, 154; pearsonii, 154; tricrenata, 612-; trilobata, 612-, 653
BECKER, V. E., J. REEDER & R. STETLER. Biomass and habitat of nitrogen fixing lichens in an oak forest in the North Carolina piedmont, 93
BENSON, S. *See* PEARSON, L. C. & S. BENSON
BERNARD, T. & M. GOAS. Acides aminés libres et triméthylamine de quelques Stictacées, 354
BEST, G. N., 560*
Biomass, of lichens and mosses in desert ecosystems, 470; of nitrogen-fixing lichens in North Carolina, 93
Blasia pusilla, 271, 467, 488
Blepharostoma arachnoideum, 480-; trichophyllum, 270-, 462, 481, 539-; trichophyllum subsp. brevirete, 462, 480-
Blindia tortifolia, 168
Blue-green algae, associated with Anthelia, 332
BOARDMAN, C. M. Mosses not previously reported from western Pennsylvania, 351
BOE, A. A. *See* HOFFMAN, G. R. & A. A. BOE
BONNER, C. E. B. (obituary), 399
Bourgeanic acid, 71-
BOWERS, F. D. *See* FRECKMANN, S. & F. D. BOWERS
BOWLER, P. A. Ramalina thrausta in North America, 529
Brachymenium consimile, 182
Brachythecium, 612-; acuminatum, 194, 546; acuminatum var. cyrtophyllum, 194; calcareum, 630-, 634*; collinum, 546; curtum, 194; digastrum, 194; flexicaule, 652; lamprocarpum, 330; oxycladon, 194, 546, 630-, 652; plumosum, 195, 630-; populeum, 195; reflexum, 195, 652; reflexum var. pacificum, 195; rivulare, 195; rutabulum, 169, 195, 630-, 652; salebrosum, 169, 195, 546, 630-, 652; velutinum, 195
BRASSARD, G. R. & D. P. WEBER. New or additional moss records from Newfoundland III, 186
Brazil, new genus of Lejeuneaceae from Amazonas, 606
Breutelia affinis, 169; arcuata, 284-; elongata, 169; pendula, 169
British Columbia, hepatics from, 539; second locality in North America for Cololejeunea macounii, 647
British Isles, ecology of copper mosses, 175
BRITTON, E. G. K., 560*
BROOKS, R. R. *See* LEE, J., R. R. BROOKS, R. D. REEVES & T. JAFFRE, *and* WARD, N. I., R. R. BROOKS & E. ROBERTS
Brotherella recurvans, 195, 653; tenuirostris, 188-, 195, 612
BROWN, D. H., D. L. HAWKSWORTH & R. H. BAILEY (eds.). Lichenology: Progress and problems (review), 229
Bryaceae, protonemal gemmae in, 655
Bryhnia graminicolor, 652; novae-angliae, 195, 652
Bryoerythrophyllum arcuatum, 158-; campylocarpum, 158-, 233-; jamesonii, 158-; recurvirostre, 330, 546
Bryogeography, of Meteoriopsis, 584
Bryophytes, autecology in sandstone canyons in southern Illinois, 571; names of authors, 502; saxicolous associations in Illinois, 612

Bryowijkia, 543-
Bryoxiphium norvegicum, 284-
Bryum algovicum, *182*, 195, 546; alpinum, 175-; amblyophyllum, 169; angustirete var. compactum, 182; argenteum, 175-, 195, 470-, 546, 630-, 652; caespiticium, 160, 195, 470-, 546, 630-; capillare, 160-, 195, 206, 329, 439-; ceramiocarpum, 328; coronatum, 655-, 659*; creberrimum, *195*; hawaiicum, 330; incacorralis, 182; klinggraeffii, 655-, 657*; laevigatum, 169; lisae var. cuspidatum, 195; mucronatum, 169; muehlenbeckii, 351; pseudotriquetrum, 183, 195, 630-, 634*, 652; tortifolium, 186; truncorum, 169; verticillatum, *264*
Bucegia, 270-
BUCK, W. R. & L. R. LANDRUM. A new species of Astomiopsis (Ditrichaceae), 359
Buellia sect. Melanaspicilia, 100-; coniops, 100-; novomexicana, 470-; retrovertans, 470-; triphragmioides, 53
Buxbaumia, 149-; himalayensis, 206
Buxbaumiaceae, new genus from Chile, 149
Byssoloma leucoblepharum, 342; rotuliforme, *342*; subdiscordans, 342

Cadmium, effect on growth of bryophytes, 533
Calcium oxalate, as source of high ash yields in lichen, 334
Callicladium haldanianum, 195, 653
Calliergon cordifolium, 195, 353, 652; giganteum, 351; stramineum, 351
Calliergonella cuspidata, 195
Caloplaca amabilis, 470-; aurantiaca, 32-; cerina, 32-, 37*, 53; erythrantha, 363; ferruginea, 54; holocarpa, 32-, 37*, 54; modesta, 470-; saxicola, 470-; scabrida, 363; ulmorum, 32-, 37*, 44*
Calymperes androgynum, *23*; armatum, *5*; glaziovii, *5*; hobsonii, *5*; lanceolatum, *13*; leboucherianum, *26*; meyeri, *5*
Calypogeja fissa, 653; integristipula, 270-, 462, 482; muelleriana, 270-, 462, 480-, 612-; neesiana, 482; sphagnicola, 462, 480-; suecica, 270-, 482; trichomanis, 270-, 462, 482, 539-
Camptochaete ramulosa, 304-, 307*, 309*, 311*
Campyliadelphus, 543-
Campylium chrysophyllum, 195, 652; hispidulum, 195, 546, 652; polygamum, 203-; radicale, 195, 547, 652; stellatum var. protensum, 195
Campylopus, 233-; in Mexico, 119; andicola, 119-; angusti-alatus, 119-; arctocarpus, 119-; arsenei, *119*; cavifolius, 182; chrismarii, 119-; chrismarii var. **tolucensis** comb. nov., 120; clavatus, 168; cucullatifolius, 182; destructilis, *119*; flexuosus, 119-; fragilis, 119-; introflexus, *119*, 329; jugorum, 119-; karstenii, *119*; laevigatus, *119*; lamellicosta, *119*; leucogaster, 119-; leucognodes, 182; liebmannii, *119*; luridus, *119*; lutescens, *119*; mexicanus, 119-; nigrescens, *119*; pilosissimus, *119*; polytrichoides, 119-; porphyrodictyon, 119-; renneri, 119-; richardii, 119-; saint-pierrei, 119-; savannarum, 119-, 122*; savannarum subsp. bartlettii, 119-, 122*; schimperi, 119-; sprucei, 182; strictus, *119*; subconcolor, 119-; subjugorum, 119-, 182; subturfaceus, 119-; subulatus, 119-; subulatus var. schimperi, *120*; tolucensis, 119-, *120*; trichophorus, 182; tunariensis, 182; vitzliputzli, *119*
Canada, epiphytic lichens in Alberta, 48; Hepaticae of Yukon Territory, 461
Candelaria concolor, 32-, 37*, 44*; concolor fo. substellata, 363; fibrosa, 32-, 363
Candelariella aurella, 470-; rosulans, 470-; subdeflexa, 32-, 37*; vitellina, 54
Candelina submexicana, 470-
Carotenoids, in spores of Polytrichum commune, 88, 313
CARVEY, K., D. R. FARRAR & D. C. GLENN-LEWIS. Bryophytes and revegetation of coal spoils in southern Iowa, 630
CASE, J. W. Lichens on Populus tremuloides in western central Alberta, Canada, 48
Catillaria boutellii, 342; glauconigrans, 54
Caudalejeunea, 606-
Cephalozia, 340-; ambigua, 480-; bicuspidata, 270-, 466, 487, 653; catenulata, 480-; connivens, 480-, 653; lacinulata, 480-; leucantha, 466, 480-; loitlesbergeri, 480-; lunulifolia, 466, 487; macounii, 480-; media, 270-; pleniceps, 270-, 466, 487
Cephaloziella alpina, 480-; divaricata, 467, 488, 612-, 642; hampeana, 488; rubella, 270-, 467, 488; rubella var. sullivantii, 653
Ceratodon purpureus, 168, 195, 547, 630-, 633*, 651; purpureus fo. xanthopus, 329
Cetraria chlorophylla, 54; halei, 54; pinastri, 54
Cetrelia, 125-
Chandonanthus hirtellus, 154; pusillus, 154; setiformis, 463
Checklist, of liverworts and hornworts of North America, 405
Chemistry, of Dimelaena and Thamnolia, 100
Chemosyndromic variation, in Parmelia pulla group, 125
Chile, new genus of Buxbaumiaceae, 149
Chiloscyphus, 169, 340-; pallescens, 163-, 270-, 353, 486, 642; pallescens var. fragilis, 486; polyanthos, 270-, 466, 486; polyanthos var. rivularis, 487
Chiodecton montagnaei, 137; sanguineum, 137
CHOPRA, R. N. & M. S. RAWAT. Studies on production and behavior of protonemal gemmae in some Bryaceae, 655
CHOPRA, R. S. New combinations in Indian mosses, 543

Chromium, accumulated in New Caledonia bryophyte, 203; in corticolous lichens, 279
CHURCHILL, S. P. Contributions towards a moss flora of Nebraska II, 160
CHURCHILL, S. P. Mosses of the Great Plains II. South Dakota east of the Missouri River, 544
CHURCHILL, S. P. & P. L. REDFEARN. Hepaticae and Anthocerotae of Nebraska, 640
Cladonia, tensile strength of podetia, 524; alpestris, effect of ozone on phycobiont of, 600; arbuscula, effect of ozone on, 600; conista, 71-, 73*; chlorophaea, 55, 71-, 73*; chlorophaea group, fumarprotocetraric acid production in, 71; coniocraea, 55, 600-, 612-; cryptochlorophaea, 71-, 73*; fimbriata, 55; grayi, 71-, 73*; merochlorophaea, 71-, 73*; mitis, 524-; mitis, effects of radiation and ecology on photosynthesis in, 83; perlomera, 71-, 73*; pyxidata, 55; sylvatica, 524-, verticillata, 83-, 524-
Cladopodiella fluitans, 653
Clasmatocolea paucistipula, 169; turgescens, 169; zotovii, 169
CLAUZADE, G. & C. ROUX. Les champignons lichénicoles non lichénisés (review), 391
CLAYTON-GREENE, K. A., T. G. A. GREEN & B. STAPLES. Studies of Dawsonia superba 1. Antherozoid dispersal, 439
Cleistotoma ambiguum, 543-
Clevea hyalina, 275
Climacium americanum, 195, 652; dendroides, 195, 284-, 351, 353
Coal spoils, revegetation of by bryophytes, 630
Collatolic acid, 350
α-Collatolic acid, 536-
Collema coccophorum, 470-; conglomeratum, 93-; furfuraceum, 55; polycarpon, 470-; subflaccidum, 55; subfurvum, 93-; tenax, 455-
Cololejeunea biddlecomiae, 612-, 653; **cornutissima** comb. nov., 411; **ephemeroides** comb. nov., 411; macounii, second North American locality of, 647; minutissima, 647-
Colombia, mosses of, 158
Conocephalum conicum, 274, 489, 643, 653
Conostomum australe, 169; jamesonii, 181-
Constictic acid, 100-
Copper mosses, ecology in British Isles, 175
Coscinodon cribrosus, 175-; verticillatus, *264*; wrightii, 470-
CRANDALL-STOTLER, B. *See* STOTLER, R. & B. CRANDALL-STOTLER
Cratoneuron commutatum, 650; filicinum, 195, 351
CROSBY, M. R. Florschuetzia, a new genus of Buxbaumiaceae (Musci) from southern Chile, 149
CROSBY, M. R. Recent Literature on Mosses—106, 217;—107, 384;—108, 550;—109, 695
Crossidium aberrans, 170-, 470-; erosum, 470-; seriatum, in U.S.A., 170; squamiferum, 170-
CRUM, H. Meiothecium, a new record for North America, 188
CRUM, H. Mosses of the Great Lakes forest, (review), 392
CRUM, H. William Campbell Steere: An account of his life and work, 662
CRUM, H. (dedication) William Campbell Steere, 1
CRUM, H. & Y. MESCALL. Grimmia pulvinata in eastern North America, 152
CRUM, H. & J. A. SNIDER. Sphagnum quinquefarium in the American West, 156
CRUM, H. *See* ZANDER, R. H. & H. CRUM
Cryphaea sect. Apocryphaea, 522; blumenauiana, 523; capensis, 523; coffeae, 523; evanescens, 523; gardneri, 523; henschenii, 523; kunertii, 523; leiboldii, 523; leptoteris, 523; madagassa, 523; pinnata, 183; rubicaulis, 523; subintegra, *524*; welwitschii, *524*
Cryphaeaceae, new combinations in Schoenobryum, 522
Cryptochila acinacifolia, 169; grandiflora, 169
Cryptochlorophaeic acid, 71-
CULBERSON, C. F., W. L. CULBERSON & D. A. ARWOOD. Physiography and fumarprotocetraric acid production in the Cladonia chlorophaea group in North Carolina, 71
CULBERSON, C. F., W. L. CULBERSON & T. L. ESSLINGER. Chemosyndromic variation in the Parmelia pulla group, 125
CULBERSON, C. F., W. L. CULBERSON & A. JOHNSON. Nonrandom distribution of an epiphytic Lepraria on two species of Parmelia, 201
CULBERSON, W. L. Recent Literature on Lichens—95, 208;—96, 369;—97, 701
CULBERSON, W. L. (review) D. H. Brown, D. L. Hawksworth and R. H. Bailey (eds.), Lichenology: Progress and problems, 229
CULBERSON, W. L. (review) G. Clauzade and C. Roux, Les champignons lichénicoles non lichénisés, 391
CULBERSON, W. L. *See* CULBERSON C. F., W. L. CULBERSON & D. A. ARWOOD, *and* CULBERSON, C. F., W. L. CULBERSON & T. L. ESSLINGER, *and* CULBERSON, C. F., W. L. CULBERSON & A. JOHNSON
Cyrtomnium hymenophylloides, 186
Cyrtopus setosus, 304-, 307*, 309*, 311*

Daltonia bilimbata, 183; gracilis, 183; pseudostenophylla, 330; pulvinata, 183
Dawsonia superba, antherozoid dispersal in, 439

Dedication, 1
4-0-Demethylglomelliferic acid, 201-
4-0-Demethylstenosporic acid, 125-
Dermatocarpon lachneum, 470; miniatum, 470-; plumbeum, 470-
Desert, lichen and moss distribution and biomass in, 470; nitrogen-fixing lichen roles in New Mexico, 561
Desmatodon heimii var. arcticus, 638-; obtusifolius, 195; plinthobius, 470-; **steereanus** sp. nov., 638, 639*
Development, of protonemal gemmae in Bryaceae, 655
Dichelyma capillaceum, 195; uncinatum, 652
Dicranella cardotii, 168; heteromalla, 195, 612-, 630-, 631*, 633*, 652; varia, 160
Dicranodontium denudatum, 650
Dicranoloma robustum, 168
Dicranoweisia antarctica, 168; cirrata, 175-
Dicranum, 233-; arenarium, 368; berteroanum, 9; bonjeanii, 195; circinatum, *14*; condensatum, *195*; condensatum, nomenclature of, 365, 366*, 367*; flagellare, 195, 652; fulvum, 195, 612-, 652; fuscescens, 652; montanum, 195, 652; muehlenbeckii, 365-; polysetum, 195, 652; sabuletorum, 163, 195, 365-, 368; scoparium, 195, 365-, 652; spurium, 365-; undulatum, 652; viride, 195, 652
Didymodon, 188-, 233-; microstomus, *544*; rigidulus, 233-, 650; tophaceus, 233-, 351
Diffractaic acid, 136-
Dimelaena, paleogeography, chemistry and taxonomy of, 100; californica, 100-, 112*; diffractella, 100-, 104*, 112*; oreina, 101, 104*, 105*, 108*, 109*, 112*, 470-; radiata, 100-, 104*, 112*; thysanota, 100-, 112*
Dimerella bacillifera, 363; pyrophthalma, 363
Dioicous mosses, spatial pattern in Atrichum angustatum, 284
Diphyscium, 149-; fendleri, 149-; foliosum, 571-, 575*, 576*, 577*, 578*, 580*, 653; fulvifolium, 149-; perminutum, 149-; submarginatum, 149-
Diplophyllum, 480-; albicans, 465; apiculatum, 612; taxifolium, 465, 539-, 653
Diploschistes actinostomus, 470-
Dirinaria applanata, 136-, 363; aspera, 137; picta, 136-
Distichium capillaceum, 168
Distribution, of lichens and mosses in hot desert ecosystems, 470; of lichens related to laboratory growth experiments, 317; of Sphagnum pylaesii, 527
Ditrichaceae, new species of Astomiopsis, 359
Ditrichum lineare, 651; pusillum, 195, 630-, 651; strictum, 168
Divaricatic acid, 125-, 201-
Donnellia, 188-; floridana, *192*
DOWDEN, D. L. *See* FORMAN, R. T. T. & D. L. DOWDEN
Drepanocladus aduncus, 169, 195, 547, 652; aduncus var. polycarpus, 195, 351; exannulatus, 195; exannulatus fo. **pseudotrichophyllus** fo. nov., 340; exannulatus var. rotae, 339-; fluitans, 195; trichophyllus, 339-; uncinatus, 169
Dumortiera hirsuta, 163

Ecology, and radiation in Cladonia mitis, 83; bryophyte revegetation of coal spoils, 630; laboratory growth of lichens based on distribution in nature, 317; of bryophytes in relation to heavy metals, 625; of bryophytes in Illinois, 571; of copper mosses in British Isles, 175; of epiphytic bryophytes and lichens, 32, 48; of lichens and mosses in hot deserts, 470; of nitrogen-fixing lichens, 93, 561; of Parmelia chlorochroa, 292; of saxicolous bryophyte and lichen associations, 612
Editorial, 232
EGAN, R. S. New and additional lichen records from Texas II, 136
Electrophoresis, of protein extracts from the Parmelia perforata complex, 429
Element content, influence of coal-fired powerplant on Parmelia chlorochroa, 492; of Parmelia chlorochroa in Montana and Wyoming, 292
Encalypta alpina, 461-; ciliata, 186; procera, 187; rhabtocarpa, 206; sandwicensis, 329; scabrata, 330; streptocarpa, 175-; vulgaris, 547
Endocarpon pusillum, 470-
Entodon beyrichii, 183; cladorrhizans, 195, 547, 630-; concinnus, 187; seductrix, 160-, 195, 630-; subcuspidatus, 330
Entostodon, 181-; bonplandii, 182
Ephemerum cohaerens, 160; crassinervium, 160; spinulosum, 160
Epiphytes, heavy metals in Pterogonium gracile from one phorophyte during 1944–1976, 625; Lepraria on Parmelia, 201; lichens on Populus tremuloides in Alberta, 48; on Populus deltoides in South Dakota and Montana, 32
ERBISCH, F. H., J. B. LIGON & D. E. MATHENA. Measurement of tensile strength of Cladonia podetia, 524
ERBISCH, F. H. *See* BARSTOW, J. M. & F. H. ERBISCH
ERDMAN, J. A. & L. P. GOUGH. Variation in the element content of Parmelia chlorochroa in the Powder River Basin of Wyoming and Montana, 292
ERDMAN, J. A., L. P. GOUGH & R. W. WHITE. Calcium oxalate as a source of high ash yields in the terricolous lichen Parmelia chlorochroa, 334

ERDMAN, J. A. *See* GOUGH, L. P. & J. A. ERDMAN
Erythrophyllopsis **andina** comb. nov., 159; boliviana, *159*; fuscula, *159*
ESSLINGER, T. L. *See* CULBERSON, C. F., W. L. CULBERSON & T. L. ESSLINGER
Eucladium aeruginosum, 259; curvirostre, 253; verticillatum, 263*, 264
Eurhynchium austrinum, 169; hians, 195; praelongum, 169; pulchellum, 195, 652
Evernia divaricata, 529-; mesomorpha, 55, 317-; prunastri, 439-
Exsiccati, Sphagnotheca Boreali-americana: Fascicle II, 645

Fabronia ciliaris, 328; degeneri, 328-; donnellii, *192*; nietneri, 328-
FAHSELT, D. & R. F. JANCEY. Polyacrylamide gel electrophoresis of protein extracts from members of the Parmelia perforata complex, 429
FARRAR, D. R. *See* CARVEY, K., D. R. FARRAR & D. C. GLENN-LEWIS
FIGUEIRAS, M. L. & M. KEOGH. Perlatolic acid in Glossodium aversum: A lichen new to Venezuela, 654
Fissidens adiantoides, 196, 351; anomalus, 206; biformis, 206; bryoides, 196, 233-, 547; bryoides var. viridulus, 206; cristatus, 154, 196, 351-, 651; elegans, 344-; exiguus, 353; fontanus, 196; guianensis, *163*; **hoei** sp. nov., 344; hyalinus, 206; minutulus, 651; obtusifolius, 353; osmundoides, 612-, 651: rambii, 206; ravenelii, 163; rigidulus, 182, 304-, 307*, 309*, 311*; viridulus, 161, 163-, 196
FLEISCHER, M. Die Musci der Flora von Buitenzorg. Flore de Buitenzorg, Part 5 (review), 394
Floribundaria floribunda, 584-
Florschuetzia gen. nov., 149, 150*; **pilmaiquen** sp. nov., 149, 150*
FLORSCHÜTZ, P. A. (obituary), 395
Foliicolous lichens, in Hawaii, 342
Fontinalis antipyretica, 196, 652; dalecarlica, 652; flaccida, 652; hypnoides, 196, 547; novae-angliae, 652
Foray, 1976 A. LeRoy Andrews Bryological, 651
FORMAN, R. T. T. & D. L. DOWDEN. Nitrogen-fixing lichen roles from desert to alpine in the Sangre de Cristo Mountains, New Mexico, 561
Fossombronia dumortieri, 271; foveolata, 653; himalayensis, 340-; longiseta, 270-; macounii, 270-; pusilla, 270-
FRAHM, J.-P. Zur Campylopus-Flora von Mexico, 119
FRAHM, J.-P. Conspectus der Mittel- und Südamerikanischen Campylopus-Arten (Dicranaceae) (review), 708
FRECKMANN, S. K. Mosses of Portage County, Wisconsin, 193
FRECKMANN, S. & F. D. BOWERS. New moss reports for Wisconsin, 650
Frullania asagrayana, 653; eboracensis, 642, 653; inflata, 612-, 642; kunzei, 164; rostrata, 169; tamarisci, 467; tamarisci subsp. obscura, 154
FRYXELL, P. A. (review) Memorias del IV Congreso Venezolano de Botánica, 391
FULFORD, M. Recent Literature on Hepatics—76, 223;—77, 376;—78, 380
Fulgensia desertorum, 470-
Fumarprotocetraric acid, 100-, 105*, 201-; production in the Cladonia chlorophaea group in North Carolina, 71
Funaria, 181-; hygrometrica, 196, 533-, 547, 652, 655-; hygrometrica, release of sperms in, 619; muhlenbergii, 470-; papillosa, 362; tucumanica, 359-
Fungi, associated with Anthelia, 332

Gackstroemia weindorferi, 169
Gamete, dispersal distances in Atrichum angustatum, 284
Gemmae, production and behavior on Bryaceae protonema, 655
Geocalyx, 480-; graveolens, 270-, 353, 466, 653
GLENN-LEWIS, D. C. *See* CARVEY, K., D. R. FARRAR & D. C. GLENN-LEWIS
Globulina boliviana, 76-; globifera, *77*; peruviana, *80*
Globulinella, 233-; taxonomy of, 76; **benoistii** comb. nov., 79, 80*; globifera, 77, 78*, 81*; peruviana, 80*, 81*
Glomellic acid, 125-, 201-
Glomelliferic acid, 125-, 201-
Glossadelphus abortivapicus, 329; chrysobasilaris, 330; irroratus, 330
Glossodium aversum, new to Venezuela, 654*; japonicum, 654-
GOAS, M. *See* BERNARD, T. & M. GOAS
GODFREY, J. D. New and interesting hepatics from British Columbia, Canada, and northern Washington State, U.S.A. I., 539
GOUGH, L. P. & J. A. ERDMAN. Influence of a coal-fired powerplant on the element content of Parmelia chlorochroa, 492
GOUGH, L. P. *See* ERDMAN, J. A. & L. P. GOUGH, *and* ERDMAN, J. A., L. P. GOUGH & R. W. WHITE
GRADSTEIN, S. R. (obituary) Peter Arnold Florschütz (1923–1976), 395
GRADSTEIN, S. R. Studies on Lejeuneaceae subfam. Ptychantoideae (Hepaticae) IV. Verdoornianthus, a new genus from Amazonas, Brazil, 606
Graphis lineola var. marginata, 363
Grayanic acid, 71-

Great Plains, mosses of South Dakota east of the Missouri River, 544
GREEN, T. G. A. *See* CLAYTON-GREENE, K. A., T. G. A. GREEN & B. STAPLES
Greenland, Seligeria diversifolia new to, 364
GRIFFIN, D., III. Más adiciones a la flora musqueña de Venezuela, 181
Grimmia, 470-; alpicola, 196, 353, 547; alpicola var. dupretii, 650, 652; alpicola var. rivularis, 196; apiculata, 206; apocarpa, 168, 196, 652; apocarpa var. ambigua, 196; apocarpa var. pulvinata, 328; atrata, 175-; hermanii, 650; indianensis, 152-; julacea, 523; khasiana, 206; laevigata, 470-; olneyi, 196; pilifera, 206; plagiopodia, 152-; pulvinata, 206, 339; pulvinata, in eastern North America, 152; scabrifolia, 330; sommervelli, 206; torquata, 330; trichophylla, 152-; verticillata, *264*
Growth, effect of Cadmium on bryophytes, 533
Gymnocolea inflata, 463, 482
Gymnomitrion, 480-; apiculatum, 539-; concinnatum, 465, 539-; corallioides, 465; obtusum, 465, 539-
Gymnostomum aeruginosum, 254*, 259; aestivum, *243*; angustifolium, 233-; calcareum, 259; chenii, 233-; curvirostrum, 253; euchloron, *243*, *265*; guadalupense, *243*; incurvans, *247*; laeve, *247*; lamprocarpum, *243*; maschalocarpum, *243*; orizabanum, 253; recurvirostrum, 253; recurvirostrum var. latifolium, 253; recurvirostrum var. scabrum, 253; recurvum, *544*; rupestre, 259; rupestre var. latifolium, 253; stillicidiorum, 253; uvidum, 253; valerianum, 262, 263*
Gyrophoric acid, 100-, 105*
Gyroweisia, 233-; barbulacea, 265; benoistii, 79, 233-; boliviana, 233-; brevicaulis, 233-; lindigii, 233-; luisieri, 259; obtusifolia, 76-, 80*, 265; papillosa, 265; pusilla, 259; tenuis, 233-

Haplocladium microphyllum, 196; virginianum, 196
Haplomitriales ord. nov., 407
Haplomitriopsida class. nov., 407
Haplomitrium, 100-; hookeri, in western Himalayas, 340
Haplozia, 345-
Harpanthus flotovianus, 487, 539-
HAUSMANN, M. K. & D. J. PAOLILLO JR. On the development and maturation of antheridia in Polytrichum, 143
Hawaii, Fissidens hoei sp. nov. from, 344; new or noteworthy mosses from, 328; obligately foliicolous lichens in, 342
Heavy metals, effect of Cadmium on bryophyte growth, 533; in Pterogonium gracile from 1944–1976, 625; in New Zealand bryophytes, 304
Hedwigia ciliata, 196, 353, 652; hornschuchiana, 233-
Helodium blandowii, 196, 351; blandowii var. helodioides, 196, 351; paludosum, 196
Hepaticae, of British Columbia and Washington State, 539; of Montana, 270; of Nebraska, 640; of North America, 405; of Wyoming, 480; of Yukon Territory, 461
Hepatophyta div. nov., 407
Heppia, 536-; lutosa, 470-
Heppsora, new genus from India, 536; **indica** gen. & sp. nov., 537*, 538*
Herbaria, of bryophyte authors, 502
Herberta sakurai, 154
HERMANN, F. J. Validation of the name Drepanocladus exannulatus fo. pseudotrichophyllus, 339
Herzogiella striatella, 612-, 653; turfacea, 196, 653
Heterodermia, 470-
Heteroscyphus bescherellei, 154
HOE, W. J. Additional new and noteworthy records for Hawaiian mosses—4. Recent collections from Haleakala National Park and adjacent regions, Island of Maui, 328
HOFFMAN, G. R. & A. A. BOE. Ecological study of epiphytic cryptogams on Populus deltoides in northeastern South Dakota and adjacent Minnesota, 32
Homalia trichomanoides, 652
Homalothecium **euchloron** comb. nov., 544; sericeum, 187*
Homomallium adnatum, 196
HONG, W. S. An annotated checklist of the Hepaticae of Wyoming, 480
HONG, W. S. Thalloid Hepaticae of Montana and phytogeographical relationships to neighboring states and provinces, 270
HONG, W. S. & D. H. VITT. Hepaticae of the Yukon Territory, Canada, 461
Hornworts, checklist of North American, 405
HORTON, D. G. & W. B. SCHOFIELD. Cololejeunea macounii, a second locality in North America, 647
Husnotiella, 76-; obtusifolia, 265; revoluta, 233-; torquescens, 470-
Hydrothyria, 600-; venosa, 445-
Hygroamblystegium fluviatile, 196; tenax, 163-, 196, 652; tenax var. spinifolium, 196
Hygrobiella, 480-
Hygrohypnum closteri, in the Piedmont of North Carolina, 163; eugyrium, 652; ochraceum, 652
Hygrolejeunea alaskana, 467
Hylocomium brevirostre, 653; pyrenaicum, 653; splendens, 48-, 653; umbratum, 653
Hymenostylium aurantiacum, 233-; calcareum, 259; crustaceum, 253; curvirostrum, 253; eggersii, 253; glaucum, 253; glaucum var. cylindricum, 253; incurvans, 247; longo-

pulvinatum, 253; nanangium, 253; pseudorupestre, 253; recurvirostrum, 253, 254*, 652; recurvirostrum var. commutatum, 233-; stilicidiorum, 253; verticillatum, *264*; xanthocarpum, 233-
Hyophila involuta, 650
Hypnodendron vitiense, 154
Hypnum sect. Campyliadelphus, 543-; chrysogaster, 169; cupressiforme, 161, 169, 304-, 307*, 309*, 311*, 625-; euchloron, *544*; fertile, 653; imponens, 196, 653; jungermannioides, *544*; lindbergii, 196, 461-; microcarpum, 188-; pallescens, 196, 653; plumaeforme, 154, 330; pratense, 196, 353; schmidii, *544*
Hypogymnia austerodes, 55; physodes, 55, 171-, 317-
Hypothamnolic acid, 654-
Hypotrachyna, 445-; boquetensis, 348-; **coorgiana** sp. nov., 348, 349*; **mason-halei** sp. nov., 348, 349*; pustulifera, 136-; sublaevigata, 348-

IHANTOLA, A. *See* KARUNEN, P. & A. IHANTOLA
Illinois, autecology of bryophytes in sandstone canyons, 571; saxicolous bryophyte and lichen associations in, 612
India, Haplomitrium hookeri in western Himalayas, 340; mosses from Himachal Pradesh, 206; new combinations in mosses of, 543; new lichen genus from, 536; new Parmeliaceae from, 348
Iowa, bryophyte revegetation of coal spoils in southern Iowa, 630; new bryophyte records, 352
Isopterygiopsis muelleriana, 650, 653
Isopterygium elegans, 612-; pulchellum, 32-
Isothecium stoloniferum, 647-

JAFFRÉ, T. *See* LEE, J., R. R. BROOKS, R. D. REEVES & T. JAFFRÉ
Jamesoniella autumnalis, 484, 653; colorata, 169
JANCEY, R. F. *See* FAHSELT, D. & R. F. JANCEY
JENSEN, T. E. *See* SPECTOR, D. L. & T. E. JENSEN
JOHNSEN, I. & L. RASMUSSEN. Retrospective study (1944–1976) of heavy metals in the epiphyte Pterogonium gracile collected from one phorophyte, 625
JOHNSON, A. *See* CULBERSON, C. F., W. L. CULBERSON & A. JOHNSON
Jubula javanica, 154; pennsylvanica, 612-
Jungermannia, 340-; atrovirens, 539-; crenuliformis, 612-; karl-muelleri subsp. **heteroicum** comb. nov., 413; lanceolata, 270-, 484; pyriflora subsp. **purpurea** comb. nov., 413; pyriflora subsp. purpurea var. **innovata** comb. nov., 413
Jungermanniopsida class. nov., 407

KÄRENLAMPI, L. (ed.), Proceedings of the Kuopio meeting on plant damages caused by air pollution (review), 392
KARUNEN, P. & A. IHANTOLA. Studies on moss spores V. Carotenoids of Polytrichum commune, 88
KARUNEN, P. & A. IHANTOLA. Studies on moss spores VI. Production of carotenoids in germinating Polytrichum commune spores, 313
Kashyapia, 543-
KEOGH, M. *See* FIGUEIRAS, M. L. & M. KEOGH
KLEE, R. & L. STEUBING. Die Veränderung der Atranorinkonzentration in Laubflechten durch Licht, Wasserversorgung und SO_2-Begasung, 171
KUMAR, S. S. & C. N. NEGI. Additions to the moss flora of Himachal Pradesh I, 206
Kurzia makinoana, 154

Laboratory, growth of lichens in, 317
LAI, M. -J. Bryoflora of Yuenyang Lake Natural Reserve, Taiwan, 153
LANDRUM, L. R. *See* BUCK, W. R. & L. R. LANDRUM
LANGE, B. Additional notes on the distribution of Sphagnum pylaesii, 527
Lecania dimera, 55
Lecanora allophana, 55; alphoplaca, 470-; calcarea, 470-; cenisia, 470-; cinerea, 470-; coilocarpa, 55; conizioides, 439-; dispersa, 470-; frustulosa, 470-; garovaglii, 470-; hageni, 32-, 56; hueana fo. microcarpa, *102*; impudens, 56; mougeotioides, *102*; muralis, 470-
Lecanoric acid, 100-, 105*
Lecidea decipiens, 470-; vernalis, 56
Lecidella glomerulosa, 56; stigmatea, 470-
LEE, J., R. R. BROOKS, R. D. REEVES & T. JAFFRÉ. Chromium-accumulating bryophyte from New Caledonia, 203
Lejeunea hasskarliana, 606-; marsupiifolia, *609*; torulosa, 606-
Lejeuneaceae subfam. Ptychanthoideae, new genus from Brazil, 606
Lembophyllum clandestinum, 169
Lepicolea yakushimensis, 154
Lepidolaena allophylla, 169; magellanica, 169
Lepidozia fauriana, 154; filamentosa subsp. subtransversa, 154; laevifolia, 169; reptans, 270-, 462, 482, 653
LEPP, N. W. & M. J. ROBERTS. Some effects of Cadmium on growth of bryophytes, 533
Lepraria, 470-; as epiphyte on Parmelia, 201; membranacea, 612-
Leptobryum pyriforme, 547, 612-, 630-, 655-, 659*

Leptodictyum riparium, 196; trichopodium, 196, 547
Leptodontium, 233-; angustinerve, 233-, 253; erythroneuron, 158-; flexifolium, 329; valerianum, 262; viticulosoides, 233-
Leptogium chloromelum, 93-; corticola, 93-; cyanescens, 93-, 612-; cyanescens, ultrastructure in, 445, 447*, 448*, 449*, 450*, 453*; issatchenkoi, 317-; saturninum, 56
Leptoscyphus australis, 169
Leptostomum inclinans, 169
Leptotrema polycarpum, 139; santense, 139
Lescuraea **laevifolia** comb. nov., 544; **ramuligera** comb. nov., 544
Leskea gracilescens, 161, 196, 547, 630-; laevifolia, *544*; polycarpa, 32-, 196; ramuligera, *544*; subtilis, *544*
Leucobryum albidum, 612-; candidum, 304-, 307*, 309*, 311*; glaucum, 196, 284-, 353, 652; scabrum, 154
Leucodon brachypus var. andrewsianus, 652
Leucolejeunea clypeata, 612-; unciloba, 612-
Lichens, ecology and nitrogen-fixing in North Carolina, 93; from Argentina 363; from Texas, 136; growth experiments based on distribution in nature, 317; in hot deserts, 470; nitrogen-fixing roles in New Mexico mountains, 561; on Populus tremuloides in Alberta, 48
Light, effects on lichen physiology, 171; effects on photosynthesis in Cladonia mitis, 83
LIGON, J. B. *See* ERBISCH, F. H., J. B. LIGON & D. E. MATHENA
Lindbergia brachyptera, 160-, 196, 547
Literature on Hepatics—76, 223;—77, 376;—78, 380
Literature on Lichens—95, 208;—96, 369;—97, 701
Literature on Mosses—106, 217;—107, 384;—108, 550;—109, 695
Liverworts, checklist of North American, 405
Lobaria adscripturiens, 354-; amplissima, 354-; discolor, 354-; laetevirens, 354-; meridionalis, 354-; oregana, 93-; orientalis, 354-; quercizans, 93-; scrobiculata, 354-; spathulata, 354-
Lopadium puiggarii, 343; subcoerulescens, 343
Lophocolea, 612-; bidentata, 169, 480-; bispinosa, 169; cuspidata, 480-; fulva, 169; heterophylla, 487, 571-, 575*, 576*, 577*, 578*, 580*, 630-, 642, 653; heterophylla, water relations of elongating seta cells, 345; lenta, 169; minor, 270-, 353, 466, 487
Lophozia alpestris, 463, 483, 539-; ascendens, 270-, 463, 483; atlantica, 480-; attenuata, 484, 653; badensis, 270-, 480-; bantriensis, 270-, 480-; barbata, 463, 480-; binsteadii, 464; collaris, 270-, 463, 483; excisa, 464, 483, 653; floerkei, 464, 480-; gillmani, 270-, 463, 480-; grandiretis, 464; hatcheri, 270-, 463, 482; heterocolpa, 270-, 463, 480-; incisa, 270-, 464, 484, 539-; kunzeana, 464, 480-; longidens, 464, 480-; lycopodioides, 463, 483; obtusa, 464, 484; opacifolia, 542; porphyroleuca, 270-, 464, 483; quadriloba, 464, 480-; rutheana, 463, 480-; ventricosa, 270-, 464, 483, 539-; ventricosa var. longiflora, 483; ventricosa var. silvicola, 483, 541; wenzelii, 464, 483, 539-
Lopholejeunea, 606-
Loxodelic acid, 201-
Luisierella barbula, 233-
Lunularia, 439-, 480-; cruciata, 274
Lyellia aspera, 461-

Macquarie Island, checklist of bryophytes, 167
Macrodiplophyllum microdontum, 465; plicatum, 647-
Macrolichens, saxicolous associations in Illinois, 612
Macromitrium, 188-; longirostre, 169
MAGILL, R. E. A reexamination of Globulinella (Musci: Pottiaceae), 76
Makinoa crispata, 154
Mannia fragrans, 274, 489, 642; pilosa, 270-
MANUEL, M. G. Miscellanea bryologica. I. Meteorium aongstromii Manuel, nom. nov. and Penzigiella longinervis Dix. ex Chopra, nom. nud., 198
MANUEL, M. G. Monograph of the genus Meteoriopsis (Bryopsida: Meteoriaceae), 584
MANUEL, M. G. Studies in Cryphaeaceae IV. New combinations in Schoenobryum, 522
Marchantia, 340-, 439-; berteroana, 170; polymorpha, 275, 468, 490, 533-, 643
Marchantiopsida stat. nov., 408
MARSH, J. E. *See* NASH, T. H., III, S. L. WHITE & J. E. MARSH
Marsupella condensata, 539; emarginata, 465, 480-, 539-; revoluta, 465; sphacelata, 480-; ustulata, 485
Mastigophora diclados, 154
MATHENA, D. E. *See* ERBISCH, F. H., J. B. LIGON & D. E. MATHENA
MATTERI, C. M. (review) J.-P. Frahm. Conspectus der Mittel- und Südamerikanischen Campylopus-Arten (Dicranaceae), 708
Meiosis, in Sphaerocarpos texanus sporocytes, 184
Meiothecium, new to North America, 188; commutatum, 188-; donnellii, *192*; tenerum, 192*
Memorias del IV Congreso Venesolano de Botánica (review) 391
Merochlorophaeic acid, 71-
MESCALL, Y. *See* CRUM, H. & Y. MESCALL
Mesoptychia sahlbergii, 464

Meteoriella, 584-; soluta, 154
Meteoriopsis, generic monograph, 584; sect. Squarridium, 587; ancistrodes, 596; formosana, 588; reclinata, 586*, 588, 589*, 591*; reclinata var. ancistrodes, 597; reclinata var. ceylonensis, 588; reclinata var. formosana, 588; reclinata fo. pilifer, 588; reclinata var. subreclinata, 588; sinensis, 588; sordida, 598; squarrosa, 586*, 592, 593*; squarrosa var. longicuspis, 595; undulata, 586*, 596, 597*
Meteorium sect. Squarridium, 587; ancistrodes, 596; **aongstromii** nom. nov., 199, 200*; cordatum, 200; divergens, 584-; henschenii, 199; himalayense, 596; illecebrum, 198-; reclinatum, 588; sinense, 588; solutum, 584-; squarrosulum, 588; squarrosum, 592; squarrosum var. brevifolium, 592; subreclinatum, 588
4-0-Methylcryptochlorophaeic acid, 71-
4-0-Methylolivetoric acid, 201-
Metzgeria atrichoneura, 170; conjugata, 273, 647-, 653; fruticulosa, 270-; furcata, 170, 612-; hamata, 170, 270-; pubescens, 273, 467; temperata, 647-
Mexico, Campylopus flora, 119
Micro-biocoenosis, in Anthelia juratzkana, 332
Mielichhoferia, 359-; elongata, ecology in British Isles, 175; macrocarpa, 175-
MILLER, H. A. (obituary) Charles Edmond Bradlaugh Bonner, servant of botany, 399
MILLER, N. G. (review) H. Crum, Mosses of the Great Lakes forest, 393
Minnesota, ecology of epiphytes on Populus deltoides, 32
Mittenothamnium diminutivum, 188-
Mnium, 143-, 619-; affine, 196, 547; ciliare, 163-, 612-, 650, 652; cinclidioides, 196, 652; cuspidatum, 196, 547, 630-, 652; drummondii, 196; hornum, 652; hymenophylloides, 652; lycopodioides, 652; medium, 196; orthorrhynchum, 547; pseudopunctatum, 650; punctatum, 196, 612-; punctatum var. elatum, 196, 652; rugicum, 650, 652; spinulosum, 196; undulatum, 284-
Moerckia, 270-, 480-; blyttii, 539-; flotowiana, 642
MOGENSEN, G. S. Seligeria diversifolia, a moss new to Greenland, 364
Molendoa boliviana, 248; boliviana var. brevifolia, 248; excelsa, 247; herzogii, 248; hornschuchianum, 233-; obtusifolia, 248; obtusifolia var. densissima, 248; obtusifolia var. incrassata, 248; sendtneriana, 239*, 242*, 247; sendtneriana var. japonica, 233-; sendtneriana fo. propagulifera, 233-; sendtneriana var. tenuinervis, 248; tenuinervis, 247
Mollia aeruginosa, 259; calcarea, 259; verticillata, 264
Montana, element content of Parmelia chlorochroa, 292; thalloid Hepaticae of, 270
Morinia ehrenbergiana, 158-
Morphology, of Meteoriopsis, 584
Mosses, in hot desert ecosystems, 470; of South Dakota, 544; new combinations in Indian, 543; new reports for Wisconsin, 650; new reports from Newfoundland, 186
Muelleriella crassifolia, 168
Mylia anomala, 465, 539-, 653; verrucosa, 154
Myurella sibirica, 652

Nardia breidleri, 480-; compressa, 480-; geoscyphus, 484, 539-; insecta, 484; scalaris, 465, 484
NASH, T. H., III, S. L. WHITE & J. E. MARSH. Lichen and moss distribution and biomass in hot desert ecosystems, 470
Nebraska, Hepaticae and Anthocerotae from, 640; mosses of, 160
Neckera lindigii, 183; parvula, 544; pennata, 652; squarrosa, 592; subseriata, 544
NEGI, C. N. *See* KUMAR, S. S. & C. N. NEGI
NEHLSEN, W. In vitro meiosis of Sphaerocarpos texanus sporocytes, 184
Nephroma helveticum, 56
New Caledonia, chromium-accumulating bryophyte, 203
New Mexico, nitrogen-fixing lichen roles in mountain regions of, 561
New York, bryophytes of Cranberry Lake region, 651
New Zealand, heavy metals in bryophytes of, 304
Newfoundland, new or additional mosses, 186
News and Notes, 231, 404, 557, 710
Nitrogen-fixing, in lichens of desert and alpine areas of New Mexico mountains, 561; of lichens in North Carolina, 93
Normandina pulchella, 363
NORRIS, D. H. (review) G. A. M. Scott and I. Stone, The mosses of Southern Australia, 227; (review) H. O. Whittier, Mosses of the Society Islands, 228
Norstictic acid, 100-, 105*, 348
North America, checklist of liverworts and hornworts, 405
North Carolina, ecology of nitrogen-fixing lichens, 93; noteworthy bryophytes of, 163; physiography and fumarprotocetraric acid production in the Cladonia chlorophaea group, 71
Nostoc commune, ultrastructure of, 445, 454*, 455*
Notothylas orbicularis, 644
Nowellia curvifolia, 154, 571-, 575*, 576*, 577*, 578*, 580*, 612-, 653

Obituaries, 395, 399
Ocellularia americana, 139

Odontolejeunea, 606-
Odontoschisma denudatum, 653; grosseverrucosum, 154; macounii, 467; prostratum, 488, 612-; sphagni, 467
Ohio, chromium in corticolous lichens in, 279
Oligotrichum gymnostomulum, 359-
Olivetoric acid, 125-, 201-
Orthodontium pellucens, 329
Orthotheca berteroana, *9*; circinata, *14*
Orthotrichum alpestre, 187; anomalum, 206, 547; concavifolium, *523*; diaphanum, 161, 329, 547; gymnostomum, 187*; hillebrandii, 331; obtusifolium, 161, 196, 547, 652; ohioense, 652; pumilum, 161, 196, 547; rupestre, 206; sordidum, 196; stellatum, 162, 196; strangulatum, 160-
OSORIO, H. S. Contribution to the lichen flora of Argentina X. Lichens from Santa Catalina, Buenos Aires Province, 363
Oxostenosporic acid, 125-, 201-
Oxystegus cylindricus, *329*, 652
Ozone, effect on lichens and phycobionts, 600

Pachyglossa tenacifolia, 169
Paleogeography, of Dimelaena and Thamnolia, 100
Pallavicinia longispina, 154; lyellii, 653
Paludosic acid, 71-
PAOLILLO, D. J., JR. Release of sperms in Funaria hygrometrica, 619
PAOLILLO, D. J., JR. *See* HAUSMANN, M. K. & D. J. PAOLILLO JR.
Papillaria henschenii, *199*
Paraleucobryum longifolium, 652
Parmelia, 125-; as substrate for Lepraria, 201; adpicta, 125-; albertana, 56; arseana, 470-; aurulenta, 317-; bolliana, 32-, 470-; brattii, 125-; caperata, 279-, 280*, 317-; chlorochroa, calcium oxalate as source of high ash yields in, 334; chlorochroa, element content in, 292, 295*; chlorochroa, influence of coal-fired powerplant on element content in, 492, 499*; conspersa, 470-; delisei, 125-; dissecta, 612-; dissensa, 470-; exasperatula, 56; flaventior, 470-; furfuracea, 171-; hypoleucina, 429-, 430*; hypotropa, 429-, 430*; kurokawae, 470-; lineola, 470-; loxodella, 125-; loxodes, 125-, 201-; luteonotata, 125-; mexicana, 470-; microsticta, 363; multispora, 57; olivacea, 57; perforata, 429-, 430*; perforata complex, polyacrylamide gel electrophoresis of protein extracts, 429; **pictada** sp. nov., 131; plana, 125-; pokornyi, 125-; psoromifera, 470-; pulla, 125-; pulla group, chemosyndromic variation in, 125; pustulosa, 125-; reticulata, 470-; rudecta, 279-, 280*, 317-; ryssolea, 125-; saxatilis, 171-; **scabrella** sp. nov., 134; septentrionalis, 57; subaurifera, 57, 524-; subelegantula, 48-; subolivacea, 57; subrudecta, 317-; **subverrucella** sp. nov., 133; sulcata, 57, 317-, 524-; tinctina, 470-; trabeculata, 57; **verrucella** sp. nov., 132; verruculifera, 125-, 201-; waiporiensis, 125-; weberi, 470-
Parmeliaceae, new species from India, 348
Parmelina lindmanii, 363; pilosa, 363
Parmeliopsis ambigua, 57; hyperopta, 58
Parmotrema dilatatum, 136-; endosulphureum, 137; haitiense, 138; **kamatii** sp. nov., 349*, 350; mellissi, 348-; rampoddense, 348-; reticulatum, 363; robustum, 138; subtinctorium, 136-; tinctorium, 136-
PATWARDHAN, P. G. & A. V. PRABHU. Three new species of Parmeliaceae from India, 348
PEARSON, L. C. & S. BENSON. Laboratory growth experiments with lichens based on distribution in nature, 317
PECK, J. H. New state and county bryoflora records from Iowa, 352
Pellia endiviifolia, 272, 467, 488; epiphylla, 272, 345-, 488, 612-, 653; neesiana, 272, 480-
Peltigera aphthosa, 561-; canina, 58, 93-, 561-; horizontalis, 58; polydactyla, 58; praetexta, 561-; rufescens, 58, 561-; spuria, 58; venosa, 561-
Peltolepis, 270-
Peltula euploca, 470-; obscurans var. desertícola, 470-; obscurans var. hassei, 470-; polyspora, 470-
Pennaria leucosticta, 93-
Pennsylvania, mosses new to western, 351
Penzigiella cordata, 200; longinervis, *200*
Perlatolic acid, 71-, 125-, 201-; in Glossodium aversum, 654
Peru, new species of Desmatodon from, 638
Petalophyllum, 359-
PETERSON, W. Clarification of the nomenclature of Dicranum condensatum, 365
Phaeocalicium populneum, 58
Phaeoceros, 340-; laevis, 353
Phaeographina arechavaletae, 363
Phaeolejeunea, 606-
Phascum cuspidatum, 197, 548
PHILLIPS, W. L., R. L. STUCKEY & M. A. ROSS. Index to plant distribution maps in North American periodicals through 1972 (review), 556
Philonotis, 164-; curvata, 183; elegantula, 183; falcata, 206; fontana, 197; hastata, 331; longiseta, 353; marchica, 650; ruriflora, 181-
Photosynthesis, effects of radiation and ecology in Cladonia mitis, 83
Phycobionts, effect of ozone on Trebouxia in Cladonia alpestris, 600; ultrastructure of Nostoc commune in Leptogium cyanescens, 445
Physcia, 100-; aipolia, 32-, 58; albicans, 363; ascendens, 32-, 58; caesia, 470-; callosa,

470-; ciliata, 32-, 37*, 43*; halei, 470-; muscigena, 470-; orbicularis, 32-, 37*, 44*, 58, 470-; setosa, 59; stellaris, 32-, 37*, 43*, 59, 470-; syncolla, 363
Physciopsis elaeina, 32-, 37*; syncolla, 32-, 37*
Physcomitrium pyriforme, 197
Physconia grisea, 32-, 37*, 59
Physiography, and fumarprotocetraric acid production in the Cladonia chlorophaea group in North Carolina, 71
Physiology, effect of ozone on lichens and phycobionts, 600; effects of radiation and ecology on photosynthesis in Cladonia mitis, 83; of lichens, 171; of nitrogen-fixing lichens in New Mexico, 561
Phytogeography, laboratory growth of lichens based on distribution in nature, 317; of epiphytic lichens in Alberta, 48; of thalloid hepatics in Montana and adjacent areas, 270
Pilotrichella mauiensis, 331
Pilotrichopsis dentata, 154
Pilotrichum reclinatum, 588; squarrosum, 592
Plagiochila, 340-; arctica, 466; asplenioides, 270-, 466, 487, 653; banksiana, 154; fruticosa, 154; fuscella, 169; gollani, 154; porelloides, 612-; retrospectans, 169; trabeculata, 155
Plagiomnium maximoviczii, 155
Plagiopus oederiana 331
Plagiothecium cavifolium, 197, 329, 548, 612-, 653; denticulatum, 197, 653; laetum, 197, 653; latebricola, 197
Platydictya confervoides, 652; **jungermannioides** comb. nov., 544; subtile, 197, 652; **subtilis** comb. nov., 544
Platygyrium, 188-; repens, 197, 548, 630-, 653
Pleuridium andinum, 359-
Pleuroclada, 480-; albescens, 466, 539-
Pleuroweisia schliephackei, 233-
Pleuroweisieae, in Middle America, 233
Pleurozia acinosa, 155; giganteoides, 155
Pleurozium schreberi, 197, 284-, 653
Podetia, tensile strength of, in Cladonia, 524
Pogonatum, 340-; alpinum, 168; pensilvanicum, 353, 653; urnigerum, 206
Pohlia annotina, 197, 652; baldwinii, 331; bulbifera, 652; cruda, 197, 331, 652; mauiensis, 331; nutans, 175-, 197, 612-, 630-, 652; wahlenbergii, 163-, 197, 548, 652
Polytrichastrum alpinum, 653; formosum, 653; pallidisetum, 653
Polytrichum, 284-, 619-; development and maturation of antheridia, 143; commune, 197, 439-, 630-, 653; commune, carotenoids in spores of, 88, 89*, 313; commune var. swartzii, 155; formosum, 197; juniperinum, 143-, 144*, 168, 197, 206, 630-, 653; longisetum, 197; ohioense, 197, 284-, 353, 439-, 612-; piliferum, 197, 207, 331, 653; strictum, 197, 233-, 653
Populus deltoides, epiphytes on, 32; tremuloides, lichens on, in Alberta, 48
Porella cordeana, 480-; elegantula, 304-, 307*, 309*, 311*; navicularis, 488; platyphylla, 488, 630-, 642; platyphylloidea, 480-, 653; roellii, 480-, 647-
Porina phyllogena, 343
Portraits of American bryologists and lichenologists in The Bryologist, 559, 560*
Pottia, 233-; arizonica, 470-; glauca, 253; heimii, 168; nanangia, 253
Pottiaceae, new species of Desmatodon from Peru, 638; Pleuroweisieae in Middle America, 233; taxonomy of Globulinella, 76
PRABHU, A. V. *See* PATWARDHAN, P. G. & A. V. PRABHU
Preissia quadrata, 276, 468, 490
Protein, polyacrylamide gel electrophoresis of extracts in Parmelia perforata complex, 429
Protocetraric acid, 100-, 105*
Protonema, production and behavior of gemmae on, in Bryaceae, 655
Pseudevernia furfuracea, 171-
Pseudobarbella **ancistrodes** comb. nov., 596
Pseudoleskeella tectorum, 548
Pseudoparmelia baltimorensis, 136-; crozalsiana, 363; texana, 363
Pseudospiridentopsis horrida, 155
Psilopilum australe, 168
Psora, 536-
Pterigynandrum filiforme, 652
Pterobryopsis, 584-
Pterogoniella, 188-; donnellii, *192*
Pterogonium gracile, heavy metals in, 625
Pterygoneurum ovatum, 470-, 548; subsessile, 548
Ptilidium ciliare, 462; pulcherrimum, 653
Ptilium crista-castrensis, 197, 653
Ptychocoleus marsupiifolius, *609*
Ptychomnion aciculare, 169
PURSELL, R. A. Fissidens hoei, sp. nov. from Hawaii, 344
Pycnolejeunea callosa, 606-
Pylaisiella, 188-; polyantha, 48-, 197, 548, 653; selwynii, 197, 653
Pyrenula leucoplaca, 59
Pyxine subcinerea, 363

Radiation, effects on photosynthesis in Cladonia mitis, 83
Radula, 340-, 345-; complanata, 488, 612-, 653; obconica, 612-; prolifera 467
Ramalina, 59; chilensis, 529-; chondrina, 529-; farinacea, 439-; leptocarpha, 529-; menziesii, 529-; paludosa, 71-; roesleri, 529-; thrausta, distribution in North America, 529, 530*; usnea, 529-
Rangiformic acid, 201-
RASMUSSEN, L. *See* JOHNSEN, I. & L. RASMUSSEN

RAWAT, M. S. *See* CHOPRA, R. N. & M. S. RAWAT
Reboulia, 340-; hemisphaerica, 274, 489, 642
REDFEARN, P. L. *See* CHURCHILL, S. P. & P. L. REDFEARN
REEDER, J. *See* BECKER, V. E., J. REEDER & R. STETLER
REESE, W. D. The genus Syrrhopodon in the Americas I. The elimbate species, 2
REESE, W. D. (review) M. Fleischer, Die Musci der Flora von Buitenzorg. Flore de Buitenzorg, Part 5, 394
REESE, W. D. (review) W. L. Phillips, R. L. Stuckey and M. A. Ross, Index to plant distribution maps in North American periodicals through 1972, 556
REEVES, R. D. *See* LEE, J., R. R. BROOKS, R. D. REEVES & T. JAFFRE
Revegetation, of coal spoils in Iowa by bryophytes, 630
Reviews, 227, 391, 555, 708
Rhabdoweisia crenulata, in Colombia, 158; crispata, 329, 652
Rhacocarpus humboldtii, 169
Rhacomitrium aciculare, 652; aquaticum, 652; crispulum, 168; heterostichum, 233-, 652; lanuginosum, 168, 203-, 284-
Rhizocarpon disporum, 470-
Rhizogonium badakense, 155; mnioides, 169, 183
Rhizomnium horikawae, 155; parvulum, 155; tuomikoskii, 155
Rhodobryum giganteum, 155; roseum, 162, 197, 353, 548, 652
Rhynchostegiella compacta, 548
Rhynchostegium celebicum, 329; microcarpum, 188-; serrulatum, 197, 630-, 652; tenuifolium, 169
Rhytidiadelphus squarrosus, 653; triquetrus, 197, 284-, 653
Riccardia, 169; chamaedryfolia, 164; latifrons, 273, 489; multifida, 273, 480-; palmata, 273, 489; sinuata, *164*, 270-
Riccia austini, 480-, 643; beyrichiana, 270-, 490, 643; campbelliana, 643; crystallina, 276, 490, 643; fluitans, 276, 490, 539-, 643; frostii, 276, 480-, 541, 643; glauca, 270-, 490; hirta, 644; macallisteri, 491, 644; sorocarpa, 276, 491, 644; sullivantii, 644; trichocarpa, 644
Ricciocarpus natans, 276, 491, 539-, 644
RIEDL, H. Micro-biocoenosis of Anthelia juratzkana, 332
Rinodina sect. Eurinodina, 100-; sect. Placothallia, 100-; archaea, 59; balanina, 100-; hueana, *102*; oreina var. griseoviridis, *102*; petermanii, 100-; pyrina, 59; turfacea, 59
RITSCHEL, G. A. Verbreitung und Soziologie Epiphytischer Flechten in Nordwestbayern (review), 708
ROBERTS, E. *See* WARD, N. I., R. R. BROOKS & E. ROBERTS
ROBERTS, M. J. *See* LEPP, N. W. & M. J. ROBERTS
ROBITAILLE, G. (review) L. Kärenlampi (ed.), Proceedings of the Kuopio meeting on plant damages caused by air pollution, 392
Roccella babingtonii, 138
ROSENTRETER, R. & V. AHMADJIAN. Effect of ozone on the lichen Cladonia arbuscula and the Trebouxia phycobiont of Cladonia alpestris, 600

Saelania glaucescens, 187, 197
Salazinic acid, 348, 350
Sauteria, 270-
Saxicolous bryophyte and macrolichen associations, in Illinois, 612
SAYRE, G. Authors of names of bryophytes and the present location of their herbaria, 502
Scapania americana, 270-, 465, 480-, 539-; apiculata, 480-; bolanderi, 480-, 647-; curta, 465, 486; cuspiduligera, 465, 486; glaucocephala, 480-; gymnostomophila, 465, 480, 540; hyperborea, 480-; irrigua, 465, 486; maxima, 155; mucronata, 466, 486; nemorosa, 466, 486, 612-, 653; ornithopodioides, 155; paludicola, 270-, 466, 480-, 540; paludosa, 466, 480-; saxicola, 480-; simmonsii, 466; spitzbergensis, 466; subalpina, 270-, 486; uliginosa, 480-; umbrosa, 480-; undulata, 466, 486, 612-, 653; undulata var. oakesii, 486
Schiffneriolejeunea, 606-
Schistidium alpicola, 207; apocarpum, 207
Schistochila rigidula, 155
Schistostega pennata, 652
Schoenobryum, new combinations in, 522; **blumenauianum** comb. nov., 523; **caripense** comb. nov., 523; **coffeae** comb. nov., 523; **concavifolium** comb. nov., 523; **evanescens** comb. nov., 523; **gardneri** comb. nov., 523; **henschenii** comb. nov., 523; julaceum, 523; julaceum var. **costaricense** comb. nov., 523; **kunertii** comb. nov., 523; **latifolium** comb. nov., 523; latifolium var. **microsporum** comb. nov., 523; **leiboldii** comb. nov., 523; **leptopteris** comb. nov., 523; **madagassum** comb. nov., 523; **paraguense** comb. nov., 523; **plicatulum** comb. nov., 523; **robustum** comb. nov., 523; **rubicaule** comb. nov., 523; **subintegrum** comb. nov., 524; subintegrum var. **idanreense** comb. nov., 524; **subrobustum** comb. nov., 524; **tisserantii** comb. nov., 524; **welwitschii** comb. nov., 524
SCHOFIELD, W. B. *See* HORTON, D. G. & W. B. SCHOFIELD
Schofieldia monticola, 539-
SCHUSTER, R. M. (review) R. E. Stotler and B. Crandall-Stotler, A monograph of the genus

Bryopteris (Swartz) Nees von Esenbeck, 555
SCHUTTE, J. A. Chromium in two corticolous lichens from Ohio and West Virginia, 279
Sciaromium lescurii, 652
Scindulae, as diagnostic features in bryophytes, 164
Scopelophila cataractae, 233-
SCOTT, G. A. M. & I. STONE. The mosses of Southern Australia (review), 227
Seligeria diversifolia, new to Greenland, 364; globifera, 77; groenlandica, 364-; polaris, 364-
Sematophyllum, 169; adnatum, 188-; demissum, 612-
SEPPELT, R. D. Studies on the bryoflora of Macquarie Island I. Introduction and checklist of species, 167
Seta, water relations of elongating cells in Lophocolea, 345
SHEARD, J. W. Paleogeography, chemistry and taxonomy of the lichenized ascomycetes Dimelaena and Thamnolia, 100
SIMONE, L. D. *See* WEBER, W. A. & L. D. SIMONE
SINGH, D. K. *See* UDAR, R. & D. K. SINGH
SINGH, K. P. *See* AWASTHI, D. D. & K. P. SINGH
SLACK, N. G. & R. H. ZANDER. The 1976 A. LeRoy Andrews Bryological Foray, 651
SMITH, C. W. Notes on Hawaiian lichens I. Obligately foliicolous species, 342
SNIDER, J. A. *See* CRUM, H. & J. A. SNIDER
SO_2, effects of fumigation on lichens, 171
SOLBERG, R. M. Hygrohypnum closteri and other noteworthy bryophytes in the Piedmont of North Carolina, 163
Solenostoma atrovirens, 480-; cordifolium, 270-, 465, 485; gracillimum, 480-; hyalinum, 480-; obovatum, 480-; pumilum, 485; pumilum subsp. polaris, 480-; rubrum, 485; sphaerocarpum, 270-, 465, 485; sphaerocarpum var. amplexicaulis, 485; triste, 480-
South Dakota, ecology of epiphytes on Populus deltoides, 32; mosses east of Missouri River, 544
SPECTOR, D. L. & T. E. JENSEN. Fine structure of Leptogium cyanescens and its cultured phycobiont, Nostoc commune, 445
Sperms, release of, in Funaria, 619
Sphaerocarpiidae stat. nov., 408
Sphaerocarpos donnellii, 184-; terrestris, 644; texanus, meiosis in, 184, 185*
Sphagnotheca Boreali-americana, Fascicle II, 645
Sphagnum angustifolium, 651, 653; aongstroemii, 645-; auriculatum, *646*; balticum, 645-; bartlettianum, 645-; capillaceum, 182, 197; centrale, 197, 645-, 651, 653; compactum, 197, 645-; contortum, 645-; cuspidatum, 197; cyclophyllum, 645-; falcatulum, 168; fallax, 653; fimbriatum, 197, 533-, 630-, 645-, 651; flexuosum, 653; fuscum, 197, 653; girgensohnii, 155, 197, 651, 653; henryense, 645-; imbricatum, 645-; jensenii, 653; lenense, 645-; lescurii, 645-, 651, 653; magellanicum, 197, 353, 645-, 651, 653; majus, 645-; mendocinum, 645-; molle, 645-; nemoreum, 645-, 651; orientale, 645-; palustre, 155, 156-, 197, 645-; papillosum, 156-, 645-, 653; papillosum var. laeve, 197; perfoliatum, *646*; perichaetiale, 645-; platyphyllum, 645-; platyphyllum var. subsimplex, 527-; portoricense, 645-; pulchrum, 653; pylaesii, 645-; pylaesii, notes on distribution of, 527, 528*; quinquefarium, 156, 157*, 651; recurvum, 197; recurvum var. amblyphyllum, 353; recurvum var. tenue, 197; rubellum, 651, 653; russowii, 645-, 651, 653; sancto-josephense, 182; squarrosum, 353, 651; strictum, 645-; subnitens, 645-; subobesum, 645-; subsecundum, 197, 645-, 653; subsecundum var. rufescens, 197; subtile, 651, 653; tenellum, 645-; teres, 197; torreyanum, 351; warnstorfii, 353, 645-; wulfianum, 645-
Spores, carotenoids in Polytrichum commune, 88, 313
Sporopodium phyllocharis, 343
Spruceanthus, 606-
Squamatic acid, 100-
STAPLES, B. *See* CLAYTON-GREENE, K. A., T. G. A. GREEN & B. STAPLES
STEERE, W. C. (dedication to), 1; (biography of), 662
Stegonia latifolia var. pilifera, 170-
Stenosporic acid, 125-, 201-
Stephaniella boliviensis, 359-
STETLER, R. *See* BECKER, V. E., J. REEDER & R. STETLER
STEUBING, L. *See* KLEE, R. & L. STEUBING
Sticta aurata, 354-; fuliginosa, 354-; insinuans, 354-; limbata, 354-; sylvatica, 354-; weigelii, 93-
Stictaceae, amino acids and trimethylamine in, 354
Stictic acid, 100-, 105*
STOTLER, R. & B. CRANDALL-STOTLER. A checklist of the liverworts and hornworts of North America, 405
STOTLER, R. *See* WEST, V. & R. STOTLER
STOTLER, R. E. & B. CRANDALL-STOTLER. A monograph of the genus Bryopteris (Swartz) Nees von Esenbeck (review), 555
Strigula concreta, 343; elegans, 343; melanophana, 343; schizospora, 343; subtilissima, 343
Symbiezidium, 606-
Symblepharis lindigii, 182
Syrrhopodon, elimbate species in the Ameri-

cas, 2; alatomarginatus, 26; androgynous, 23; bernoulii, 5; berteroanus, 9; berteroanus var. planifolius, 9; berteroanus var. strictior, 9; berteroi, 9; brachystelioides, 5; brotheri, 5; ciliolatus, 28; circinatus, 14, 15*; cryptocarpos, 25*, 26; curvatus, 9; decolorans, 5; diversifolius, *14*; elatus, *11*; floridanus, 5; hioramii, 5; hobsonii, 5; hobsonii var. luridus, 8; hobsonii var. spinulosus, 28; hornschuchii, 15*, 17; incompletus, 3, 5, 7*; incompletus var. **berteroanus** comb. et stat. nov., 7*, 9; incompletus var. elatus, 11, 12*; incompletus var. **lanceolatus** comb. et stat. nov., 12*, 13; incompletus var. luridus, 7*, 8; incompletus var. **perangustifolius** var. nov., 12*, 13; juruensis, 5; kroneanus, *13*; laevidorsus, 9; leboucherianus, *26*; luridus, 8; malouinensis, 9; miquelianus, *17*; mohrii, 5; perhorridus, 9; pittieri, *14*; quintasii, 28, 29*; rigidus, 23, 25*; rufus, *17*; rupestris, 18, 20*; semicompletus, 5; sordidus, *14*; spruceanus, *26*; stenophyllus, 30; steyermarkii, 20*, 21; subdecolorans, 5; subrigidus, *14*; surinamensis, *17*; theriotii, 27, 29*; vaginans, 9; xanthophyllus, 22, 25*

Taiwan, bryoflora of Yuenyang Lake Natural Reserve, 153
Takakia lepidozioides, 647-
Tapellaria epiphylla, 343; nana, 343
Taxiphyllum deplanatum, 548
Taxonomy, of Dimelaena and Thamnolia, 100
Tayloria octoblepharus, 169
Teloschistes chrysophthalmus, 32-; chrysophthalmus var. cinereus, 363
Temnoma palmatum, 169
Temperature, effects on photosynthesis in Cladonia mitis, 83
Tensile strength, in Cladonia podetia, 524
Tetradontium repandum, 187
Tetraphis geniculata, seta morphology, 164, 165*; pellucida, 197, 612-, 652, 655-; pellucida, seta morphology, 164, 165*
Texas, lichens, 136
Thamnobryum alleghaniensis, 652; **parvulum** comb. nov., 544; **schmidii** comb. nov. 544; speciosum, 331; **subseriatum** comb. nov., 544
Thamnolia, paleogeography, chemistry and taxonomy of, 100; subuliformis, 100-, 110*; vermicularis, 100-, 110*; vermicularis var. subuliformis, 100-
Thamnolic acid, 100-, 654-
Thelia lescurii, 162
Thelotrema sanfordianum, 139
Theriotia, 149-; kashmirensis, 149-; lorifolia, 149-
THOMAS, R. J. Water relations of elongating seta cells in sporophytes of the liverwort Lophocolea heterophylla, 345
Thuidium abietinum, 548; crenulatum, 331; delicatulum, 198, 353, 612-, 652; delicatulum var. radicans, 198; furfurosum, 169; kanedae, 155; pygmaeum, 353; recognitum, 198, 630-, 652
Thyrea nigritella, 470-
Timmia austriaca, 187; megapolitana, 198, 548
Tomenthypnum nitens, 351
Toninia caeruleonigricans, 470-
Tortella calycina, 168; tortuosa, 162, 175-, 652
Tortula alpina, 328-; alpina var. inermis, 331; andina, *159*; aurea, 170-, 470-; bistratosa, 470-; intermedia, 470-; mucronifolia, 160-, 548; muralis, 187; norvegica, 188; princeps, 331; robusta, 168; rubra, 168; ruralis, 162, 186-, 207, 548; verticillata, *264*
Trachyloma indicum var. latifolium, 155
Trachypus humilis, 329
Trebouxia, effect of ozone on, 600
Trematodon ambiguus, 198; schmidii, 207
Treubia, 100-
Triandrophyllum subtrifidum, 169
Tricharia albostrigosa, 343; vainioi, 343
Trichocolea tomentella, 155, 571-, 575*, 576*, 577*, 578*, 580*
Trichostomopsis australasiae, 170-
Trichostomum, 233-, 470-; aeruginosum, 259; andinum, *159*; brachydontium, 182; calcareum, 259; crustaceum, 253; cylindricum, 233-; obtusifolium, 76-, 265; rupestre, 259; tenuirostre, 329
Trichothelium alboatrum, 343
Tridontium tasmanicum, 168
Trimethylamine, in Stictaceae, 354
Tristichiopsis mirabilis, 359-
Tristichium lorentzii, 359-
Tritomaria exsecta, 480-; exsectiformis, 464, 484; polita, 270-, 464, 480-; quinquedentata, 270-, 464, 480-, 539-; scitula, 464, 480-, 539-
Tuzibeanthus, 606-

UDAR, R. & D. K. SINGH. Haplomitrium hookeri in Western Himalayas, India, 340
Ultrastructure, of Leptogium cyanescens and its phycobiont, 445
Ulota cervina, 331; crispa, 155, 198, 652; hutchinsiae, 652
Usnea comosa, 317-; compacta, 59; glabrescens, 59; hirta, 60; scabrata subsp. nylanderiana, 60; subfloridana, 60; substerilis, 60

Venezuela, mosses of, 181; new lichen for, 654
Verdoornianthus, new genus of Lejeuneaceae from Brazil, 606, 608*; **griffinii** sp. nov., 608*, 609; **marsupiifolius** comb. nov., 608*, 609
Verrucaria fuscella, 470-

VITT, D. H. *See* ANDRUS, R. E. & D. H. VITT, *and* HONG, W. C. & D. H. VITT

WARD, N. I., R. R. BROOKS & E. ROBERTS. Heavy metals in some New Zealand bryophytes, 304

Washington State, hepatics from, 539

Water, effects of saturation on lichen physiology, 171

Water relations, in Lophocolea seta cells, 345

WEBER, D. P. *See* BRASSARD, G. R. & D. P. WEBER

WEBER, W. A. (review) G. A. Ritschel, Verbreitung und Soziologie Epiphytischer Flechten in Nordwestbayern, 708

WEBER, W. A. & L. D. SIMONE. Tetraphis pellucida and T. geniculata: Scindulae as diagnostic features in bryophytes, 164

Weissia barbulacea, 265; calcarea, 259; controversa, 198, 233-, 284, 470-, 548, 630-, 652; controversa var. longiseta, 233-; curvirostris, 253; glauca, 233-; recurvirostris, 253; rupestris, 259; sharpii, 233-; stillicidiorum, 253; verticillata, 264

WEST, V. & R. STOTLER. Saxicolous bryophyte and macrolichen associations in southern Illinois II, Panther's Den, Union County, 612

West Virginia, chromium in corticolous lichens in, 279

Weymouthia cochlearifolia, 304-, 307*, 309*, 311*

WHITE, R. W. *See* ERDMAN, J. A., L. P. GOUGH & R. W. WHITE

WHITE, S. L. *See* NASH, T. H., III, S. L. WHITE & J. E. MARSH

WHITTIER, H. O. Mosses of the Society Islands (review), 228

WILKINS, P. Observations on ecology of Mielichhoferia elongata and other "copper mosses" in the British Isles, 175

Wisconsin, mosses of Portage County, 193; new moss reports from, 650

WYATT, R. Spatial pattern and gamete dispersal distances in Atrichum angustatum, a dioicous moss, 284

Wyoming, element content of Parmelia chlorochroa, 292; Hepaticae of, 480

Xanthoparmelia, key to Texas species, 140; conspersa, 141; cumberlandia, 141; dierythra, 139, 141; hypomelaena, 139, 141; kurokawae, 141; lecanorica, 141; lineola, 141; mexicana, 136-, 141; novomexicana, 141; plittii, 139, 141; psoromifera, 141; subramigera, 140, 141; taractica, 141; tasmanica, 141; tinctina, 140, 141; tucsonensis, 140, 141; weberi, 141

Xanthoria candelaria, 60; fallax, 32-, 37*, 60, 470-; parietina, 363; polycarpa, 32-, 43*, 60

Yukon, Hepaticae of, 461

ZANDER, R. H. Crossidium seriatum found in the U.S.A., 170

ZANDER, R. H. Portraits of American bryologists and lichenologists in The Bryologist, 559, 560*

ZANDER, R. H. Rhabdoweisia crenulata and Erythrophyllopsis andina from Colombia, 158

ZANDER, R. H. The tribe Pleuroweisieae (Pottiaceae, Musci) in Middle America, 233

ZANDER, R. H. & H. CRUM. Desmatodon steereanus, a new species of Pottiaceae from Peru, 638

ZANDER, R. H. *See* SLACK, N. G. & R. H. ZANDER

ZEHR, D. R. An autecological investigation of selected bryophytes in three sandstone canyons in southern Illinois, 571

Zoopsis, 169

Zygodon compactus, 243; eggersii, 253; excelsus, 247; jamaicense, 243; menziesii, 168; pusillus, 243, 265; sendtnerianus, 247; tenellus, 243